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ABSTRACT

This study links cognitive development and psychological adaptation by relating play attributes, assessed from a predominantly cognitive-developmental perspective, to "ego resiliency," which is a measure of flexibility in coping with stress. Subjects were 104 participants in a longitudinal study (Block & Block, 1980); 78 were given solitary free play assessments at age 3, and all 104 were administered similar play assessments at age 11. Numerous scaled play ratings were grouped into two play dimensions for each age level: "Symbolic Elaboration" and "Intercoordination/Organization." Ego resiliency scores were derived from independent personality Q-sorts at ages 3, 11, 14, and 18 years. For both sexes, concurrent relationships between play dimensions and ego resiliency were examined at age 3 and age 11. Furthermore, play activities of 3- and 11-year-olds were related longitudinally to ego resiliency at ages 11, 14, and 18. Consistency of play behavior from age 3 to age 11 was explored. A five-page reference list is included. (Author/PCB)

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COGNITIVE/DEVELOPMENTAL CHARACTERISTICS OF PLAY AND THEIR RELATION TO EGO RESILIENCY: A LONGITUDINAL STUDY*

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ABSTRACT

This study links cognitive development and psychological adaptation by relating play attributes, assessed from a predominantly cognitive/developmental perspective, to "ego resiliency", a measure of flexibility in coping with stress. Subjects were 104 participants in a longitudinal study (Block & Block, 1980): Seventy-eight were given solitary free play assessments at age 3, and all 104 were administered similar play assessments at age 11. Numerous scaled play ratings were grouped into two play dimensions for each age level: "Symbolic Elaboration" and "Intercoordination/Organization". Ego resiliency scores were derived from independent personality Q-sorts at ages 3, 11, 14, and 18 years. For both sexes, concurrent relationships between play dimensions and ego resiliency were examined at age 3 and age 11. Further, 3 and 11-year play were related longitudinally to ego resiliency at ages 11, 14, and 18. Consistency of play behavior from age 3 to age 11 was explored.

For boys, findings revealed positive concurrent and longitudinal relationships between the two play dimensions and ego resiliency. Except for concurrent correlations at age 3, relationships between the combined play dimensions and ego resiliency were significant when IQ score was partialled from play.

Results were less clear for girls. "Intercoordination/Organization" -- a strong resiliency predictor for boys -- did not reveal consistent relationships to girls' ego resiliency. In general, longitudinal relationships between play and later resiliency were not significant for girls. Further, relative play behavior varied considerably from age 3 to age 11 for both sexes.

Discussion examines the relevance of cognitive/developmental processes for understanding psychological adaptation and explores sex differences in play/resiliency relationships. Future research suggestions are provided, and clinical implications of results discussed.

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COGNITIVE/DEVELOPMENTAL CHARACTERISTICS OF PLAY AND THEIR RELATION TO EGO RESILIENCY: A LONGITUDINAL STUDY

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In attempting to account for individual differences in children's level of psychological adaptation, a certain body of researchers have turned to normal developmental theory for inspirations. The predominant thrust has been toward explorations of childhood psychopathology which adopt an emotional/interpersonal developmental perspective (see Erikson 1963; Freud, 1949; Mahler, 1975). Recently, however, theorists have also begun considering the role of cognitive/developmental mechanisms in childhood psychological dysfunction (see Cowan, 1978). The assumption behind both theoretical tracts is that if normal developmental mechanisms may be readily identified, then abnormal functioning may represent either aberrations, fixations, or retardation of these same normal developmental processes.

From the cognitive/developmental perspective, this latter statement involves examining how problems with cognitive/developmental processes impair children's adaptation. Piagetian theory identifies specified cognitive structures (stage acquisitions: sensorimotor, preoperational, operational, and formal operational) and functions (assimilation and accommodation) indicative of normal developmental functioning. By extension, abnormal functioning (i.e., difficulties in psychological adaptation) may represent malfunctioning of normal cognitive/developmental processes. Structurally, then, one would expect developmental lag or nonattainment of stage acquisitions to accompany psychopathology. Functionally, one might expect difficulties in the subject's interacting with the environment (i.e., problems with the assimilation/accommodation mechanisms) to occur with psychological disturbance.

Several authors have observed that difficulties with the *functional* assimilation and accommodation mechanisms accompany psychopathology (Cowan, 1978; Block, 1982; Schmid-Kitsikis, 1976; Voyat, 1980; De Ajuriaguerra et al., 1969; Gordon & Cowan, 1971). In "traditional" Piagetian terms, "accommodation" involves modification of cognitive structures in response to the environment, while "assimilation" entails modifying interpretations of the environment in terms of already existing structures. Thus, some authors note that the disturbed child may either deform reality to fit personal views (a kind of over-"assimilation" in traditional Piagetian terminology), or may continually conform to reality (via pure imitation, etc.) without making use of personal interpretations (an over-"accommodation" in traditional Piagetian terms).

There is also a small body of literature suggesting that *structural* cognitive dysfunction occurs in various forms of psychopathology. The majority of research has examined cognitive/developmental deficit in psychotic children, where problems in sensorimotor (Serafica,1971; Rosenthal et al., 1980; De Ajuriaguerra et al., 1969), operational (conservation, classification, and class inclusion) acquisition (Voyat, 1980; Marks, 1972; Goldfarb & Mintz, 1961; Halpern, 1966; Lovell & Slater, 1960; Breslow & Cowan, 1983), and formal operational reasoning (Schmid-Kitisikis, 1976; Neal, 1966 ; De Ajuriaguerra et al.,1969) have been documented. A few studies have even demonstrated concrete operational deficiencies in schizophrenic adults (Sollod & Wachtel, 1980; Sollod & Lapidus, 1977). A more limited amount of research has examined cognitive dysfunction in less severely disturbed childhood populations (Goldshmidt & Bentler, 1968; Inhelder, 1976b; Chandler, 1973; Hains & Miller, 1980; Jurkovic & Prentice, 1977; Burka & Glenwick, 1978); however, evidence of cognitive/developmental difficulties in these samples has also been described.

One difficulty examining less severely disturbed samples is that psychological adjustment must be characterized other than through clinical diagnosis. Block and Block's (1980) notion of "ego resiliency", a measure of flexibility in adapting and coping with stress, is one construct which allows for differentiation of individual adaptation in nonclinical populations. Ego resiliency is also an attractive concept in that it presupposes a link between general psychological adjustment and cognitive functioning: Its definition implies that the well-adjusted individual is able to engage in such cognitive tasks as problem-solving, analysis, and planfulness. It also suggests that the resilient individual has the ability to "equilibrate" (i.e., assimilate or accommodate) adaptively, depending upon situational requirements.

Confirmation of the hypothesized relationship between cognition and psychological adaptation (i.e. defined here as "ego resiliency") requires an observational medium which is sensitive to both structural and functional aspects of cognition as well as to individual differences in children's adaptation. A vast literature has documented the play medium's richness for observing cognitive/developmental acquisitions such as symbolization (Piaget, 1962; Vygotsky, 1966; Elder & Pederson, 1978; Pederson et al., 1981; Jackowitz & Watson, 1980; Overton & Jackson, 1973; Fein, 1981; Fenson & Kagan, 1976) and operational capabilities (Rubin et al, 1983; Matthews, 1977). Also, play is an activity thought to contribute to such "assimilative" processes as creativity (Bruner, 1972; Lieberman, 1965; Sutton-Smith, 1967; Dansky & Silverman, 1973) and such "accommodative" processes as problem-solving (Bruner, 1972; Vandenberg, 1978; Sylva et al., 1976). Further, a smaller body of work has suggested that individual differences in cognitive/developmental processes are indeed visible through play. For example, autistic and psychotic children are shown to play in a nonsymbolic, stereotyped, fragmented, and repetitive manner (Rubin et al., 1983; Gordon & Cowan, 1983). Also, less

symbolic play activity and more repetitive, sensorimotor type play has been noted in children who are from recently divorced families (Hetherington et al, 1979, cited in Rubin et al., 1983), who are less people oriented and less well "adjusted" (Fein, 1981), and who are avoidantly or ambivalently attached (Matas et al., 1978; Rosenberg, 1984). Nonetheless, most of the existing work has focused on preschool children (Vandenberg, 1980). Also, there has been little long-term longitudinal study of cognitive play functioning and individual differences in adaptation.

Continued empirical documentation of the link between cognitive functioning and psychological adaptation -- including longitudinal investigation of such relationships -- would thus represent an important addition to existing cognitive/developmental theory and research. Also, few studies have empirically validated play's predictive value, despite its widespread use as a clinical and diagnostic tool. Goals of this study thus include 1) utilizing the ego resiliency measure to explore emerging psychological dysfunction in a nonclinical sample, thereby expanding existing knowledge of relationships between cognitive development and psychological functioning, 2) using a new, but proven medium -- namely play -- to examine cognitive/developmental individual differences, 3) assessing play and psychological adaptation longitudinally, thereby encompassing a relatively large age span (up to 15 years), and 4) exploring play behavior at a considerably older age level (11 years) than the much researched preschool and kindergarten ages.

Based on theoretical and empirical work from the cognitive/developmental, personality (ego resiliency), and play literature, the following relationships are predicted. In the structural realm, positive relationships are predicted between ego resiliency and symbolic acquisition (including the ability to engage in pretend and demonstrate advanced language use), planfulness, and intercoordination and organization of play actions. The latter encompasses an ability to group like objects together, unite objects with similar functions to create scenes, and demonstrate a general non-fragmentation of play. In the functional realm, ego resilient children are predicted to show more signs of adaptive assimilation and accommodation. They will thus show greater creativity or imaginativeness in play (traditionally regarded as requiring more "assimilation", since personal interpretations of events are emphasized), and yet their play themes and constructions will be grounded in reality (typically viewed as demanding more "accommodation" to object properties).

METHOD

Subjects were 104 participants in a 15-year longitudinal study (Block & Block, 1980). The sample was heteregeneous in terms of ethnicity (61% White, 31% Black, and 8% other

ethnicities) and socioeconomic level, although there was some over-representation of the middle and upper middle classes. Seventy-eight children were given solitary free play assessments at age 3, and all 104 children were administered play assessments at age 11. (Due to the fact that not all 3-year-olds received the play and later resiliency assessments, the sample size is even further reduced in longitudinal comparisons involving 3-year data.) At age 3, the children were permitted to play in a sandbox with a variety of miniature toys (wild animals, farm animals, family dolls, blocks, transportation toys, furniture, trees, fences, cowboys, etc.) for about 20 minutes. Transcripts were made of their play sessions. At age 11, the same toys were used, but children were requested to make up from their imagination "an exciting scene from a movie". The play session was again 20 minutes in duration, and the child's activities were videotaped.

Play behavior was rated on 9-point scales which addressed the hypotheses in question. At age 3, most ratings were based on the play transcripts, although some ratings were made by the actual observers of the play. At age 11, ratings were based on direct observation of the children's play or viewing of the videotapes. At age 3, 3 observers rated the actual play or play transcripts, and at age 11, 3 observers rated the videotapes. Ratings were then composited across observers. Ego resiliency scores were derived from independent personality Q-sorts at ages 3, 11, 14, and 18 years (see Block, 1978 for a more thorough description of the procedure). In order to determine children's level of intellectual functioning, the Peabody Picture Vocabulary Test (Dunn, 1965) was administered at age 3, and the WISC (Wechsler, 1976) was given at age 11.

RESULTS

Scaled play items were grouped conceptually into eight play scales: pretending, advanced language use, creativity, grouping/relating of play objects, planfulness, grounding in reality, fragmentation, and impoverished object combinations. Items comprising play scales were summed and then averaged to yield an overall play scale score. Reliability of scales was within acceptable limits, with Cronbach's alphas for 3-year scales ranging from .65 to .91. At age 11, most Cronbach's alphas ranged from .70 to .92, with the exception of the "grounding in reality" scale, where the Cronbach's alpha was .58. Play scales next underwent a principal components analysis with varimax rotation, which guided the formation of two play superscales at age 3 and age 11. (See Figure A for superscale composition). Positively loaded scales were given a weight of +1 and negatively loaded items a weight of -1. Relevant play scale scores then averaged in calculating the overall play superscale score for each child. These two superscales were found to be highly reliable (Cronbach's alphas ranged from .80 to .88 for both age levels). The superscales were somewhat more correlated at age 3 (r=.51, p <.01 and r=.60, p <.001 for boys

and girls, respectively) than at age 11 (r=.33, $p < .05$ and r=.03, n.s. for boys and girls, respectively). Also, one-way analyses of variance were performed to determine whether there were mean differences in superscale scores across sexes for the two play superscales at each age level. Results did not reveal significant sex differences in mean level of "Symbolic Elaboration" or "Intercoordination/Organization" for boys or girls. Also, for both play superscales, Bartlett-Box and Cochran's C tests did not reveal significant differences in the variance of superscale scores across sexes.

The two newly created superscales were entitled "Symbolic Elaboration" and "Intercoordination/Organization". The first appears to deal with the ability to manipulate the symbolic through pretend and language. It is also somewhat assimilative in nature, since it includes creativity (involving application of personal schemes to the outside world). The second superscale describes an ability to unite or interrelate objects based on either perceptual qualities, thematic relatedness (objects which go together in a scene), or uses in the real world. It is somewhat accommodative in nature, since it emphasizes modifying play as a function of object properties. It should be noted that these two play dimensions are reminiscent of the "dramatizing" (involving concentration on fantasy elaboration) and "patterning" (involving focus on relationships between objects) play components identified by another group of researchers (Shotwell et al., 1980). These authors hypothesized that both "dramatizing" and "patterning" are two possible play paths to an adaptive development. In keeping with earlier hypotheses, positive relationships between ego resiliency and "Symbolic Elaboration" as well as "Intercoordination/Organization" were predicted.

Play superscales were next correlated with ego resiliency, both concurrently and longitudinally. Table 1 shows that at age 3, the direction of correlations followed the pattern predicted. Positive relationships between the cognitive play variables and ego resiliency were found for both sexes, although the correlation between "Intercoordination/Organization" and ego resiliency for girls fell just short of statistical significance.

Table 2 reveals that at age 11, most play/resiliency relationships were stronger than at age 3. Surprisingly, "Intercoordination/Organization" -- a strong predictor of boys' ego resiliency -- showed no significant relationship to ego resiliency in girls. All other relationships were in the predicted direction.

In order to examine the longitudinal consistency of play behavior, the play superscales at age 3 were correlated with the corresponding play superscales at age 11. In general, these longitudinal correlations were not significant. The"Symbolic Elaboration" dimension at age 3 revealed little relationship to that same dimension at age 11 for girls (r=.003, n.s.) and the correlation was greater, although nonsignificant for boys (r=.19, n.s.). Relatively small longitudinal relationships also occurred for the "Intercoordination/Organization" dimension for

girls (r=.11, n.s.), although for boys the correlation approached statistical signficance (r=.29, p < .10). Although certain methodological issues may have influenced results, it does appear that relative play behavior varies considerably from the preschool to the adolescent years. In longitudinal analyses, it may therefore be informative to consider play relationships separately at each age level.

Exploration of longitudinal correlations between play at age 3 and ego resiliency at ages 11, 14, and 18 (Table 3) revealed interesting sex differences in the pattern of relationships. For boys, the direction of correlations followed the predicted pattern, and relationships were quite strong. In contrast, play at age 3 was not a significant predictor of later ego resiliency in girls. The latter finding is not surprising, given that ego resiliency at age 3 is not predictive of later ego resiliency in girls (Table 4). Resiliency at age 11, however, does predict girls' ego resiliency later in life. Nonetheless, longitudinal correlations between play at age 11 and ego resiliency at ages 14 and 18 (Table 5) again revealed strong positive longitudinal relationships for boys but not for girls.

For exploratory purposes, examination of whether concurrent play/resiliency relationships held independently of children's IQ level was investigated via multiple regression analyses. Thus, ego resiliency at each age level served as the dependent variable in a separate regression equation. The child's IQ score was entered as the first independent variable followed by the stepwise entry of the play variables in question. Separate analyses were completed for boys and girls at each age level. Partialling of IQ from developmental variables is not advocated here for a variety of methodological reasons (see Meehl, 1971), but is nonetheless reported for tradition's sake. At age 3, play was not shown to contribute significant variance to ego resiliency over and above IQ score. At age 11, however, the play variables contributed 28% of the variance in girls' ego resiliency scores over and above IQ, and 23% of the variance in boys' ego resiliency over and above IQ. For boys, play was found to contribute significant variance over and above IQ score in all longitudinal analyses (involving examinations of play at age 3 and later ego resiliency, as well as play at age 11 and later ego resiliency).

DISCUSSION

In sum, relative play behavior varied considerably from age 3 to age 11 for both sexes. For boys, findings revealed positive concurrent and longitudinal relationships between the two play dimensions and ego resiliency. Except for concurrent correlations at age 3, relationships between the combined play dimensions and ego resiliency were significant when IQ score was partialled from play. Results were less clear for girls. "Intercoordination/Organization" -- a strong resiliency predictor for boys -- did not reveal consistent relationships to girls' ego

resiliency. In general, there were strong concurrent play/resiliency relationships for girls; however, longitudinal relationships between play and girls' ego resiliency were usually not significant.

Analyses described above do not explore the causal nature of play/resiliency relationships. However, the causal question is theoretically of interest: Does play ultimately influence resiliency, or does resiliency influence play? Further, do breakdowns in cognitive processes cause ego resiliency deficit, or is cognitive play dysfunction symptomatic of an *a priori* lack of resiliency? In fact, a reciprocal process is likely: For example, lack of resiliency might engender a breakdown of cognitive play functioning, in turn contributing to further resiliency deficit, and so on. Imagine, for example, a non-resilient child who is having trouble symbolizing through play. Such an individual is unfortunately deprived of an important method of resolving emotional and interpersonal conflicts. At least for boys, this, in turn, could negatively influence the ultimate level of adjustment. Such suppositions, however, remain hypotheses for future investigation.

The primary goal of the present study was to explore associations rather than causal connections between cognitive dysfunction and problems in psychological adjustment. Concurrent correlational analyses indeed suggested that difficulties in symbolic elaboration accompany low ego resiliency across sexes. Difficulties intercoordinating and organizing play activities also appear associated with ego "brittleness" (i.e. a lack of ego resiliency) in boys, and to some extent in girls at the preschool age level. However, the striking sex differences in certain concurrent and longitudinal analyses merit separate consideration.

One unusual sex difference was that "Intercoordination/Organization" -- a strong resiliency predictor for boys -- did not appear related to girls' ego resiliency at age 11. It is possible that certain methodological factors (e.g., the nature of toys used, the solitary rather than interpersonal nature of the play assessment) biased results in unknown ways. However, another possible explanation for this sex difference is suggested by the work of J.H. Block(1983). Block describes how socialization practices gradually cause boys, but not girls, to shift away from the interpersonal context as the primary medium for cognitive development. Boys, Block points out, are exposed to more toys and activities which require experimentation, deduction of physical and logical relationships between objects, and exploration of environmental contingencies; that is, they are encouraged to engage in activities requiring more accommodation. The "Intercoordination/Organization" superscale is play dimension which relies little on the interpersonal, is accommodative in nature, and stresses the logical and physical relationships between objects. If this intercoordination/organization activity is more central to boys' development than to girls, than it is understandable why it relates more closely to boys' overall psychological adaptation. Further, if differential socialization processes have a cumulative effect

over time, then it is also comprehensible that such sex differences became more pronounced at age 11 than age 3. Also, if girls' cognitive development indeed occurs within a more interpersonal context, then girls may need to be assessed in an interpersonal rather than solitary play situation.

The sex differences revealed also have implications for the work of other play investigators. For example, Harvard Project Zero researchers (see Shotwell et al., 1980) have hypothesized that both play "patterning" (akin to "Intercoordination/Organization") and play "dramatizing" (akin to "Symbolic Elaboration) are equal paths to an adaptive development. The present findings, however, suggest that the "patterning" dimension may be less relevant for girls than for boys.

Even more striking sex differences were revealed in longitudinal analyses. While play was a strong long-term predictor of boys' ego resiliency, it did not bode well as a long-term resiliency predictor for girls. That personality outcome measures are less predictable across time for girls than for boys has been suggested by other longitudinal work (see Gjerde, Block, & Block, 1986). Gjerde et al., in fact, lament that they are unable to provide satisfactory explanations for such longitudinal sex differences. One possibility offered is that boys may be more vulnerable to certain stressors (Rutter, 1979, cited in Gjerde, Block, & Block, 1986).. Since adequate cognitive functioning -- including the ability to symbolize, intercoordinate, and organize -- may help individuals cope with stressors in their environment, then an inability to effectively engage in these cognitive processes may more readily affect boys' level of psychological adaptation. However, advance in theoretical and empirical work on sex differences is urgently needed to confirm such suppositions.

The present work offers several implications for clinical practice with children. First, child therapists often rely on play as a diagnostic tool; however, little empirical work has actually confirmed play's diagnostic validity. Results presented here, however, demonstrate that even brief, cognitively-based play observations may yield highly relevant concurrent information about the nature of children's psychological adjustment. Also, therapists often use play to interpret theme content, with less therapeutic attention to the structure and process of play. This work demonstrates that cognitive/developmental capacities which are visible through play may have much to contribute as diagnostic tools.

Justification for the therapeutic use of play to positively influence children's adaptation hinges on the causal direction of the play/resiliency relationship. However, those interested in child therapy might well consider the relevance of enhancing cognitive capacities through play. For example, should future research confirm the relevance of symbolic capabilities for coping with environmental stressors, then helping children actively elaborate their pretend stories and activities may significantly impact their life adjustment outside the playroom. In other words,

children may have much to gain not only from hearing therapist interpretations of their play themes, but by actually learning how to play "better" from a cognitive/developmental framework. All these suggestions, however, must patiently await future investigation of cause/effect relationships, refined theories of sex differences in development, as well as continued verification of the importance of cognitive processes in children's adaptation.

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FIGURE A

COMPOSITION OF PLAY SUPERSCALES
(Age 3 and Age 11)

Superscale	*Scales Comprising Superscale*
SYMBOLIC ELABORATION	Pretending
	Advanced Language Use
	Creativity
INTERCOORDINATION/ ORGANIZATION	
	Grouping/Relating of play objects
	Planfulness
	Grounding in Reality
	Fragmentation [3] (Negative Loading)
	Impoverished Object Combinations[11] (Negative Loading)

[3] Age 3 only

[11] Age 11 only

TABLE 1

CONCURRENT PEARSON CORRELATIONS
3-YEAR PLAY SUPERSCALES WITH
AGE 3 EGO RESILIENCY BY SEX[1]

	Girls	***Boys***
Play Superscale	N=42	N=36
Symbolic Elaboration	.28*	.30*
Intercoordination/Organization	.21†	.30*

[1] *Pearson correlations are based on transformed ego resiliency scores*

One-tailed significance levels:
† p <.10
* p <.05
** p <.01
*** p <.001

TABLE 2

CONCURRENT PEARSON CORRELATIONS
11-YEAR PLAY SUPERSCALES WITH
AGE 11 EGO RESILIENCY BY SEX[1]

	Girls	***Boys***
Play Superscale	N=51	N=53
Symbolic Elaboration	.55***	.50***
Intercoordination/Organization	-.07	.59***

[1] *Pearson correlations are based on transformed ego resiliency scores*

One-tailed significance levels:

† $p < .10$

* $p < .05$

** $p < .01$

*** $p < .001$

TABLE 3

LONGITUDINAL PEARSON CORRELATIONS BETWEEN PLAY SUPERSCALES AT AGE 3 AND EGO RESILIENCY AT AGES 11, 14, AND 18

	GIRLS *N=29*			BOYS *N=25*		
	Age			Age		
Play Superscale, Age 3	**11**	**14**	**18**	**11**	**14**	**18**
Symbolic Elaboration	.12	.11	.01	.43*	.59**	.36*
Intercoordination	-.18	.06	.25†	.63***[2]	.49**[2]	.56**

[1] *Pearson correlations are based on transformed ego resiliency scores*

[2] *Spearman correlations : r=.37(age 11) and r=.35 (age 14)*

One-tailed significance levels:

† $p < .10$

* $p < .05$

** $p < .01$

*** $p < .001$

TABLE 4

PEARSON CORRELATIONS ACROSS TIME FOR EGO RESILIENCY[1] -- FEMALES

Age of Ego Resiliency Rating	**3**	**11**	**14**	**18**
3				
11	.10			
14	-.12	.54***		
18	-.08	.40**	.58***	

PEARSON CORRELATIONS ACROSS TIME FOR EGO RESILIENCY[1] -- MALES

Age of Ego Resiliency Rating	**3**	**11**	**14**	**18**
3				
11	.43**			
14	.37**	.63***		
18	.48***	.60***	.60***	

[1]*Correlations are based on transformed ego resiliency scores*

One-tailed significance levels:

* $p < .05$

** $p < .01$

*** $p < .001$

TABLE 5

LONGITUDINAL PEARSON CORRELATIONS BETWEEN PLAY SUPERSCALES AT AGE 11 AND EGO RESILIENCY AT AGES 14 AND 18

	GIRLS *N=51*		**BOYS** *N=50*	
	Age		**Age**	
Play Superscale, Age 11	**14**	**18**	**14**	**18**
Symbolic Elaboration	.32*	.15	.42**	.27*
Intercoordination	-.14	-.08	.46***	.52***

[1] *Pearson correlations are based on transformed ego resiliency scores*

One-tailed significance levels:

† $p < .10$

* $p < .05$

** $p < .01$

*** $p < .001$